In the claims:

Please substitute the following full listing of claims for the claims as originally filed or most recently amended.

1. (Currently Amended) A fiber optic sensor comprising

a body of crystalline material, said body of crystalline material being resistant to persistent dimensional changes in response to stress applied thereto for an extended period,

a fiber optic element having an end surface, said fiber optic element being bonded to said body of crystalline material, and

a reflective surface positioned by said body of crystalline material at a location separated from said end surface of said fiber optic element to form a gap which varies in length in response to a condition of interest,

whereby said sensor is resistant to measurement drift under conditions of stress applied to said sensor for an extended period.

2. (Original) A fiber optic sensor as recited in claim 1, wherein a coefficient of thermal expansion of said crystalline material is matched to a coefficient of thermal expansion of said fiber optic element.

3. (Original) A fiber optic sensor as recited in claim 1, wherein the difference between a coefficient of thermal expansion of said crystalline material and a coefficient of thermal expansion of said fiber optic element is maximized.

4. (Original) A fiber optic sensor as recited in claim 1, wherein said body of crystalline material is in the form of a tube.

5. (Original) A fiber optic sensor as recited in claim 1, further including a diaphragm providing said reflective surface.

6. (Origianl) A fiber optic sensor as recited in claim 1, wherein said body of crystalline material is a substantially planar substrate having a groove in a surface thereof.

7. (Original) A fiber optic sensor as recited in claim 1, wherein said crystalline material is monocrystalline material.

8. (Currently Amended) A telemetry system including a fiber optic sensor, said fiber optic sensor comprising

a body of crystalline material, said body of crystalline material being resistant to persistent dimensional changes in response to stress applied thereto for an extended period,

a fiber optic element having an end surface, said fiber optic element being bonded to said body of crystalline material, and

a reflective surface positioned by said body of crystalline material at a location separated from said end surface of said fiber optic element to form a gap which varies in length in response to a condition of interest,

whereby said sensor is resistant to measurement drift under conditions of stress applied <u>to said sensor</u> for an extended period.

9. (Original) A fiber optic sensor as recited in claim 8, wherein a coefficient of thermal expansion of said crystalline material is matched to a coefficient of thermal expansion of said fiber optic element.

10. (Original) A fiber optic sensor as recited in claim 8, wherein the difference between a coefficient of thermal expansion of said crystalline material and a coefficient of thermal expansion of said fiber optic element is maximized.

11. (Original) A fiber optic sensor as recited in claim 8, wherein said body of crystalline material is in the form of a tube.

12. (Original) A fiber optic sensor as recited in claim 8, further including a diaphragm providing said reflective surface.

13. (Original) A fiber optic sensor as recited in claim 8, wherein said body of crystalline material is a substantially planar substrate having a groove in a surface thereof.

14. (Original) A fiber optic sensor as recited in claim 8, wherein said crystalline material is monocrystalline material.